

**AMENDMENTS TO THE CLAIMS**

The following listing of claims will replace all prior versions and listings of claims in the application.

**LISTING OF CLAIMS**

1. (currently amended) A dynamoelectric machine comprising:  
a stator core having a longitudinal axis and a length along said axis;  
wire windings on said stator core;  
a rotor shaft;  
a rotor positioned within the stator core and mounted for rotation relative to the stator core about said axis to interact magnetically with the stator core and windings, the rotor having a length along said axis;  
at least one capacitor for storing energy for driving accessories or for starting the dynamoelectric machine;  
at least a first bearing supporting the rotor shaft for rotation, said first bearing being positioned longitudinally within the stator core; and  
at least one endshield having a cavity for holding the capacitor;  
wherein said length of the rotor is less than said length of the stator.
2. (currently amended) A dynamoelectric machine as set forth in claim 18 wherein said length of the rotor is less than said length of the stator.
3. (currently amended) A dynamoelectric machine as set forth in claim 18 wherein the rotor is longitudinally centered in the stator core.

4. (currently amended) A dynamoelectric machine as set forth in claim 18 further comprising a second bearing supporting the rotor shaft for rotation.

5. (currently amended) A dynamoelectric machine as set forth in claim 18 wherein the rotor includes a recess for receiving said first bearing.

6. (currently amended) A dynamoelectric machine as set forth in claim 18 further comprising two endshields defining opposite ends of the machine, at least one of the endshields having a portion which extends to a longitudinal position within the stator core.

7. (original) A dynamoelectric machine as set forth in claim 6 wherein at least one said endshield comprises a housing for mounting electronic components of the machine.

8. (cancelled).

9. (currently amended) A dynamoelectric machine as set forth in claim 18 further comprising a cooling jacket for removing heat from the machine, the cooling jacket being in heat transfer communication with the stator core along the entire said length of the stator core.

10. (currently amended) A dynamoelectric machine as set forth in claim 18 wherein said machine is a switched reluctance type machine.

11. (currently amended) A dynamoelectric machine comprising:  
a stator core having a longitudinal axis and a length along said axis;  
wire windings on said stator core;  
a rotor mounted for rotation relative to the stator core about said axis to interact magnetically with the stator core and windings;  
at least one capacitor for storing energy for driving accessories or for starting the dynamoelectric machine; and  
two endshields defining opposite ends of the machine, at least one of the endshields having a portion which extends to a longitudinal position within the stator core and at least one of the endshields having a cavity for holding the capacitor.

12. (currently amended) A dynamoelectric machine as set forth in claim 11 ~~11~~ 24 further comprising a rotor shaft and two bearings supporting the rotor shaft for rotation, and wherein the rotor and at least one of the bearings is positioned longitudinally within the stator core.

13. (original) A dynamoelectric machine as set forth in claim 12 wherein the rotor includes a recess for receiving said bearing.

14. (currently amended) A dynamoelectric machine as set forth in claim 44 24 further comprising a cooling jacket for removing heat from the machine, the cooling jacket being in heat transfer communication with the stator core along the entire said length of the stator core.

15. (currently amended) A dynamoelectric machine as set forth in claim 44 24 wherein said machine is a switched reluctance type machine.

16. (cancelled).

17. (cancelled).

18. (new) A dynamoelectric machine as set forth in claim 1 wherein the machine comprises a plurality of capacitors for storing energy for driving accessories or for starting the dynamoelectric machine.

19. (new) A dynamoelectric machine as set forth in claim 18 wherein the cavity defines a plurality of crescent-shaped edges for receiving the plurality of capacitors.

20. (new) A dynamoelectric machine as set forth in claim 18 wherein the cavity defines six crescent-shaped edges for receiving the plurality of capacitors.

21. (new) An integrated starter generator for an automobile having the dynamoelectric machine of claim 1.

22. (new) The integrated starter generator of claim 21 wherein the dynamoelectric machine is a switch reluctance motor.

23. (new) The integrated starter generator of claim 22 further comprising a cooling jacket for removing heat from the generator, the cooling jacket being in heat transfer communication with the stator core along the entire said length of the stator core.

24. (new) A dynamoelectric machine as set forth in claim 11 wherein the machine comprises a plurality of capacitors for storing energy for driving accessories or for starting the dynamoelectric machine.

25. (new) A dynamoelectric machine as set forth in claim 24 wherein the cavity defines a plurality of crescent-shaped edges for receiving the plurality of capacitors.

26. (new) A dynamoelectric machine as set forth in claim 24 wherein the cavity defines six crescent-shaped edges for receiving the plurality of capacitors.

27. (new) An integrated starter generator for an automobile having the dynamoelectric machine of claim 11.

28. (new) The integrated starter generator of claim 27 wherein the dynamoelectric machine is a switch reluctance motor.

29. (new) The integrated starter generator of claim 28 further comprising a cooling jacket for removing heat from the generator, the cooling jacket being in heat transfer communication with the stator core along the entire said length of the stator core.